CC 87-I-12 rev.

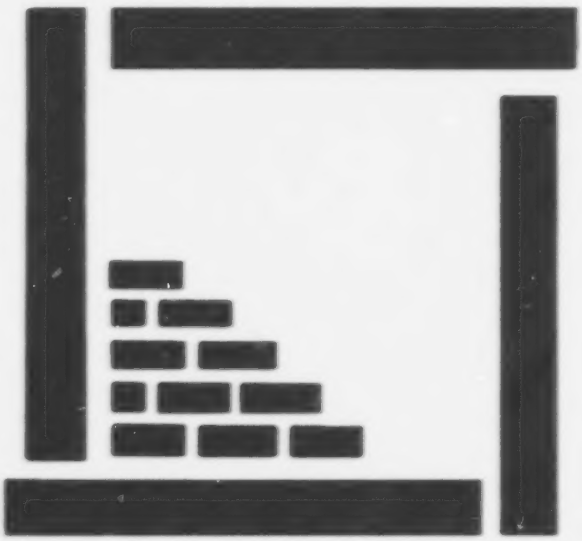
1987
Census of Construction Industries

CC87-I-12 (Revised)

INDUSTRY SERIES

Electrical Work Special Trade Contractors

Industry 1731



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The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum, Barbara J. Hadden, Edward R. Glover, Susan L. Hostetter, Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock, Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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If you have any questions concerning the statistics in this report, call (301) 763-7546.

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Issued December 1990

U.S. Department of Commerce
Robert A. Mosbacher, Secretary
Thomas J. Murrin, Deputy Secretary
Michael R. Darby, Under Secretary
for Economic Affairs

BUREAU OF THE CENSUS
Barbara Everitt Bryant, Director

BUREAU OF THE CENSUS
Barbara Everitt Bryant, Director
C. L. Kincannon, Deputy Director

Charles A. Waite, Associate Director for
Economic Programs
Roger H. Bugenhagen, Assistant Director for
Economic and Agriculture Censuses

Thomas L. Mesenbourg, Chief,
Economic Census Staff

CONSTRUCTION STATISTICS DIVISION
Leonora M. Gross, Chief

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PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries, and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

Census of Retail Trade
Census of Wholesale Trade
Census of Service Industries
Census of Transportation
Census of Manufactures
Census of Mineral Industries
Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan

areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as Current Construction Reports (building permits, housing starts, and value of new construction put in place), *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property

into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.[1] This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

Contract construction—The SIC manual defines construction in three broad types of activity that follow:

1. **Building construction by general contractors or by operative builders**- General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.

2. **Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.

3. **Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

[1]Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

Employer Companies

Developing the sampling frame for employer companies—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

Selecting the employer sample—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan

area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

Estimation procedures for 1987 and 1982 data—Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \sum_{i=1}^{n_c} x_i / p_i$$

where: x'_c is the simple unbiased estimate of a characteristic for a publication cell.

x_i is the reported value of a characteristic for an individual establishment in the publication cell.

p_i is the selection probability of that firm.

n_c is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

Reliability of employer statistics—Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.

CENSUS REPORT FORMS

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

DATA PROCESSING

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

GEOGRAPHIC CLASSIFICATION

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.

To discuss a special tabulation before submitting specifications, call 301-763-7546.

COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

*	Sampling error exceeds 40 percent.
**	Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
-	Represents zero.
†	Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
††	Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
(W)	Greater than zero but less than 1 percent.
(X)	Not applicable.
n.s.k.	Not specified by kind.

Users' Guide for Locating Statistics in This Report by Table Number

Statistics	For U.S.	By State	By employment size	By size class of dollar value of business done	By type, class, ownership, kind of business, and location of construction[1]	By specialization in types of construction
Assets and depreciation (gross book value):						
Beginning of year—buildings, machinery and equipment	3					
End of year—total	1, 3	1	5	6		
End of year—buildings, machinery and equipment	3					
Depreciation charges during year—buildings, machinery and equipment	3					
Capital expenditures:						
Total capital expenditures	1, 3	1	5	6		
New buildings—machinery and equipment	3					
Used buildings—machinery and equipment	3					
Communication services, costs for	2					
Employees:						
All employees—average number	1, 2	1	5	6		8
Construction workers—average number	1, 2, 9	1, 9				
Other employees—average number	2					
Employer costs for fringe benefits—legally required and voluntary expenditures	2					
Establishments—number in business during year	1, 2, 4, 9	1, 9	5	6		8
Hours—construction workers:						
Total	1, 2, 9	1, 9	5	6		
Quarterly	2, 9	9				
Inventories	4					
Materials, components, supplies, and fuels—costs for	1, 2	1	5	6		
Payroll:						
First quarter, all employees	2					
Annual:						
All employees	1, 2	1	5	6		8
Construction workers	1, 2	1				
Other employees	2					
Power, fuels, and lubricants—costs for	2					
Proprietors and working partners	2					
Ratios, State	13	13				
Value and receipts:						
Dollar value of business done, total	2		5	6	11	
Value of construction work, total	1, 2, 4	1	5	6	2, 7, 10	8
For work subcontracted in from others	2					
Other business receipts and land receipts[2]	2					
Net value of construction work	1, 2	1	5	6		8
Value added	1, 2	1	5	6		8
Rental costs:						
Total	1, 2	1	5	6		
For machinery and equipment	2					
For buildings	2					
Repairs to buildings and other structures	2					
Repairs to machinery and equipment	2					
Selected industry ratios	12					
Subcontract work to others, costs for	1, 2	1	5	6		8

Note: Data for 1982 and earlier years are also available in some of these tables.

[1]Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

[2]Land receipts are shown separately for SIC's 1531 and 6552 only.

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SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in electrical work at the construction site. This industry also includes establishments engaged in the installation of telecommunication equipment, sound equipment, burglar alarms, fire alarms, and telephones. For additional examples, refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for $36.3 billion in total dollar value of business. Of this amount, $35.8 billion were for the value of construction work. These establishments paid out $12.8 billion for materials, components, and supplies and $1.2 billion for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were $490 million. Value added for 1987 was $21.8 billion.

There were 49,436 establishments with total employment averaging 509,309 during the year. Total payroll for 1987 was $12.7 billion. Total hours worked by construction workers during the year were 732 million hours.

Establishments with 10 employees or more, while representing only 23 percent of the total number of employer establishments in this industry accounted for 79 percent of all business done.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation.

The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the introduction.

Figure 1. **Value of Construction Work by Type of Construction**
(Percent)

Figure 2. **Selected Costs Per Dollar Value of Business Done**
(Percent)

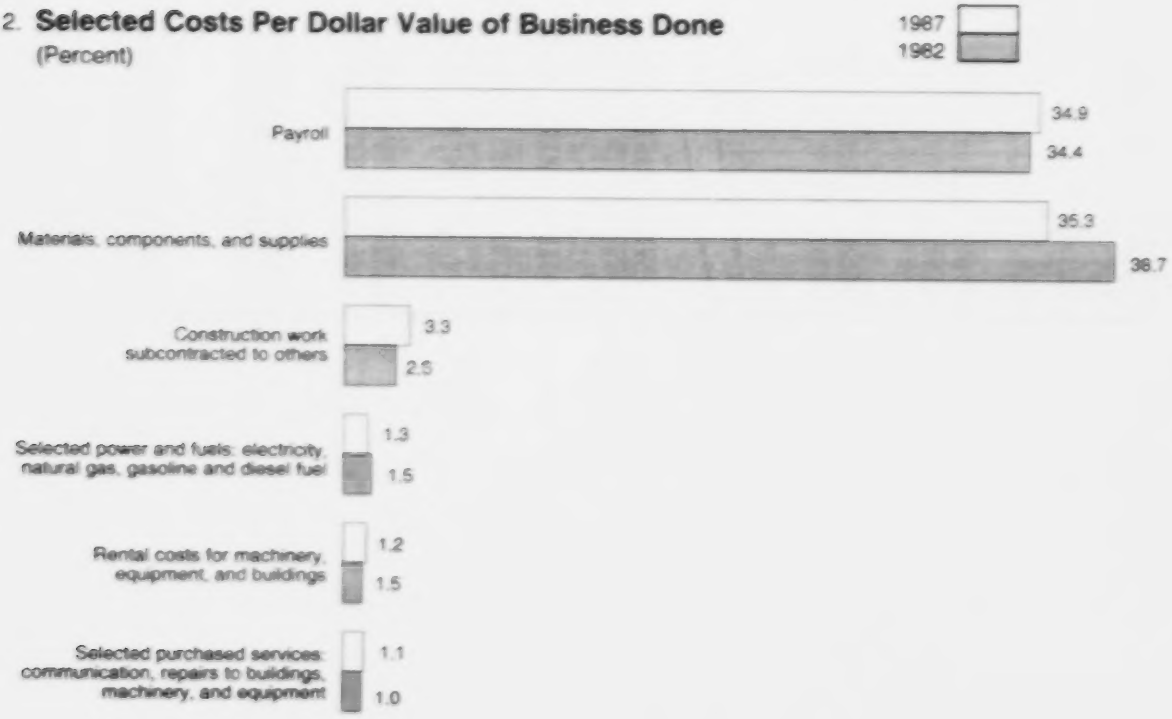

Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	1987							
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Value of construction work	Net value of construction work†
		All	Construction workers	All employees	Construction workers			
	A	B	C	D	E	F	G	H
United States	**49 436**	**599 399**	**405 982**	**12 983 516**	**9 621 983**	**732 100**	**35 828 226**	**34 657 764**
Alabama	600	6 613	5 572	125 211	98 982	10 259	401 981	382 197
Alaska	147	917	680	34 410	25 927	1 184	101 691	98 721
Arizona	877	6 256	6 497	162 088	118 267	11 328	520 045	505 202
Arkansas	415	2 728	2 106	47 568	35 629	3 730	157 870	151 040
California	5 753	57 797	44 989	1 587 436	1 186 941	76 374	4 866 720	4 596 165
Colorado	889	8 173	6 429	190 927	143 900	10 881	586 980	553 539
Connecticut	1 017	9 534	6 758	232 525	176 967	12 299	641 327	627 963
Delaware	155	1 622	1 291	37 490	27 880	2 116	108 491	106 036
District of Columbia	38	1 529	1 369	53 577	41 084	2 650	121 580	117 285
Florida	3 073	36 281	29 343	674 058	515 028	53 662	1 998 988	1 936 889
Georgia	1 218	16 633	10 621	369 426	288 375	25 789	1 014 997	989 326
Hawaii	231	1 949	1 538	55 743	42 982	2 917	196 600	190 778
Idaho	218	1 116	846	19 343	14 417	1 225	61 617	60 745
Illinois	1 881	23 636	16 903	761 382	595 241	35 362	1 970 962	1 915 645
Indiana	886	9 571	7 658	240 549	185 813	14 335	637 738	618 690
Iowa	481	3 280	2 907	87 197	52 657	4 695	206 954	203 491
Kansas	425	4 527	3 495	109 554	82 228	6 569	309 605	300 522
Kentucky	601	5 539	4 460	108 580	83 481	8 169	329 504	309 740
Louisiana	786	7 674	6 358	169 453	127 967	11 435	480 263	479 777
Maine	356	2 065	1 627	41 085	32 152	3 131	131 004	129 580
Maryland	963	14 646	11 859	325 958	246 386	21 012	942 257	927 040
Massachusetts	1 807	17 067	13 798	437 630	335 724	24 920	1 203 412	1 179 129
Michigan	1 588	15 096	11 800	445 080	337 754	21 633	1 228 011	1 185 662
Minnesota	945	8 581	6 823	249 798	190 170	12 243	687 612	672 712
Mississippi	330	2 277	1 804	41 094	30 238	2 921	126 980	121 901
Missouri	838	9 184	7 076	249 850	183 620	12 162	696 478	681 117
Montana	172	756	580	14 869	11 425	882	44 169	43 051
Nebraska	404	2 641	2 032	58 457	44 782	3 608	175 141	167 097
Nevada	247	2 768	2 211	73 319	56 147	4 323	244 191	227 966
New Hampshire	418	2 609	2 021	53 518	40 884	3 978	166 088	164 536
New Jersey	2 246	20 708	16 725	567 985	444 006	30 336	1 504 610	1 462 550
New Mexico	412	2 805	2 117	59 240	42 336	3 662	207 144	190 059
New York	3 599	45 658	36 913	1 450 701	1 119 155	68 001	3 803 434	3 718 230
North Carolina	1 619	16 338	13 408	297 163	226 160	24 958	880 489	842 177
North Dakota	218	980	741	18 180	13 888	1 496	56 340	55 098
Ohio	1 613	16 303	12 989	423 288	333 020	23 504	1 160 626	1 125 339
Oklahoma	580	4 006	3 070	79 431	59 984	5 396	231 531	220 408
Oregon	514	4 214	3 214	86 516	74 867	5 066	301 654	290 251
Pennsylvania	2 035	20 678	16 354	572 844	413 376	30 688	1 530 536	1 474 721
Rhode Island	287	1 883	1 469	48 835	37 570	2 832	138 815	135 947
South Carolina	645	9 542	7 978	178 956	136 130	15 169	455 758	440 320
South Dakota	170	730	579	11 229	8 935	841	40 111	39 241
Tennessee	727	11 012	9 215	259 154	192 320	19 560	648 989	626 948
Texas	3 153	32 827	25 861	880 544	514 730	45 759	2 065 300	1 997 290
Utah	320	2 612	2 048	59 990	46 586	3 677	192 262	184 502
Vermont	202	1 056	809	26 577	15 177	1 521	65 946	65 548
Virginia	1 272	14 928	12 053	311 646	231 399	22 257	823 952	849 913
Washington	912	9 564	6 596	223 476	183 396	10 976	636 499	617 789
West Virginia	201	1 742	1 419	38 462	31 612	2 411	96 078	95 141
Wisconsin	853	7 128	5 527	179 129	139 391	9 759	483 991	476 474
Wyoming	138	969	737	19 692	15 027	1 371	56 090	55 236

†In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

1997—Con.						1992			Relative standard error of estimate (percent) for column—			Location of establishment
Value added[1]	Cost of materials, components, supplies, and fuels	Cost of construction work subcontracted to others	Rental cost for machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	All employees[2]	Total construction receipts[3]	Value added[1]				
I	J	K	L	M	N	O	P	Q	B	H	M	
21 616 585	**13 276 299**	**1 180 462**	**440 512**	**496 613**	**3 336 998**	**434 784**	**25 948 527**	**15 122 619**	**1**	**(W)**	**1**	**U.S.**
231 415	162 904	19 464	3 526	7 290	42 136	4 487	204 512	106 264	4	4	13	AL
64 367	35 057	*2 949	2 525	*821	21 575	3 452	234 373	152 915	8	7	36	AK
288 185	222 506	14 842	6 655	8 542	51 018	5 913	340 408	173 422	4	4	11	AZ
82 780	70 186	6 529	1 780	2 086	18 214	2 261	106 796	56 067	8	7	23	AR
2 664 117	1 801 400	270 557	69 608	56 388	373 395	45 261	3 347 406	1 985 527	1	1	4	CA
343 119	215 471	13 443	8 482	5 648	61 084	8 929	666 409	351 632	3	3	11	CO
414 078	219 011	13 383	6 191	10 965	56 180	5 452	344 373	195 638	4	3	9	CT
66 166	40 367	2 454	1 390	1 447	9 382	1 256	61 302	39 698	8	6	26	DE
92 759	25 756	4 314	803	1 024	6 308	846	46 420	27 165	4	4	33	DC
1 130 468	827 685	62 086	24 794	30 698	192 325	25 689	1 267 793	699 835	2	2	5	FL
591 669	404 611	25 670	12 452	16 005	81 630	11 688	620 470	375 395	2	2	14	GA
117 010	76 496	7 621	3 279	2 938	18 602	1 297	112 311	71 723	7	5	14	HI
35 589	28 097	1 072	524	1 030	9 530	933	53 770	30 707	12	11	37	ID
1 264 271	671 243	54 017	19 480	22 132	160 590	20 347	1 342 311	663 267	2	1	7	IL
402 616	224 956	19 047	6 704	9 192	53 980	7 596	454 062	279 690	3	3	11	IN
113 136	82 555	3 462	2 310	2 660	28 793	3 157	199 536	96 619	6	5	12	IA
189 133	115 599	9 282	3 877	5 263	47 824	2 819	182 332	95 150	5	4	13	KS
182 380	131 181	19 754	4 123	4 416	44 650	3 789	179 450	106 162	5	4	11	KY
307 080	176 504	13 486	6 457	3 802	51 624	12 384	726 187	423 237	4	3	12	LA
76 734	53 439	1 411	1 114	3 581	15 300	1 181	61 356	32 279	8	8	15	ME
577 073	364 649	15 213	10 611	18 982	94 789	9 450	569 586	299 747	3	3	7	MD
738 819	444 886	25 283	10 980	21 042	97 210	10 052	625 759	375 889	2	2	7	MA
785 131	418 599	42 328	13 964	19 900	124 788	10 717	736 879	441 214	3	2	6	MI
416 607	266 400	14 898	7 247	10 537	66 469	7 381	472 901	279 502	3	3	12	MN
72 997	50 654	5 089	1 556	1 837	13 105	1 974	84 181	46 226	9	8	27	MS
436 193	250 180	17 361	7 353	9 734	64 985	8 971	607 185	353 361	3	2	12	MO
27 956	17 081	1 117	499	*1 005	8 393	964	53 639	31 880	12	11	53	MT
101 639	67 788	8 043	1 653	2 139	17 498	3 912	212 797	123 228	6	7	17	NE
144 674	85 430	16 222	5 374	3 840	23 690	1 812	126 972	79 131	9	7	18	NV
90 314	72 284	1 551	1 611	4 614	20 819	2 177	124 303	67 442	7	7	13	NH
941 888	530 611	42 057	18 789	19 032	117 189	14 081	904 331	517 706	2	2	8	NJ
109 824	82 443	17 085	2 210	3 208	31 090	2 752	135 494	62 797	6	5	13	NM
2 560 106	1 183 012	85 200	38 235	34 370	216 198	45 891	2 386 264	1 437 244	1	1	5	NY
488 475	384 206	38 312	12 722	13 235	92 600	11 175	530 616	245 053	3	2	9	NC
30 485	25 143	1 242	809	473	17 477	1 511	84 859	44 741	12	12	40	ND
700 480	441 017	34 257	11 262	15 904	96 861	13 140	798 788	475 749	2	2	8	OH
129 881	93 092	11 125	3 406	3 318	38 906	5 778	286 240	175 874	7	6	16	OK
184 236	119 734	11 402	3 553	5 052	33 166	3 167	224 167	131 156	7	5	10	OR
983 939	514 207	55 814	16 839	20 626	134 635	15 609	1 114 402	603 550	2	2	6	PA
87 134	50 911	2 888	1 371	2 106	15 967	1 547	83 924	50 679	9	7	21	RI
281 256	162 536	15 435	8 049	14 115	70 452	10 566	428 980	280 880	3	3	5	SC
21 616	16 686	869	485	1 218	5 927	778	28 875	14 487	17	15	35	SD
396 487	243 212	22 041	9 210	10 959	63 758	7 419	441 819	235 822	3	2	10	TN
1 225 320	799 246	68 010	31 085	23 188	259 367	41 027	2 415 998	1 396 533	2	2	6	TX
100 874	66 819	7 780	3 304	2 500	20 534	2 856	160 750	91 986	7	7	22	UT
36 384	29 606	397	635	1 264	9 974	749	34 524	18 141	12	13	27	VT
534 661	372 083	24 036	13 346	17 759	94 900	9 746	483 407	281 132	3	2	8	VA
374 240	256 089	20 725	11 336	8 879	64 132	9 251	696 125	444 937	3	3	10	WA
64 001	32 700	936	871	650	10 750	2 342	108 262	70 150	9	8	25	WV
294 711	194 033	7 516	4 783	7 286	53 386	6 537	354 985	210 843	4	3	8	WI
33 299	23 941	854	1 092	*1 032	14 280	1 887	93 996	54 926	12	11	44	WY

Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	1977	1972	Relative standard error of estimate (percent) 1987	1982	1977	1972
Number of establishments in business during year	49 436	39 563	36 764	32 455	1	1	1	2
Proprietors and working partners	11 406	11 792	18 574	17 738	3	2	2	3
All employees**	509 309	434 764	356 591	323 748	1	(W)	(W)	1
Construction workers:								
March	395 113	345 388	277 202	250 956	1	(W)	(W)	1
May	396 921	348 303	291 843	260 852	1	(W)	(W)	1
August	422 196	356 276	309 833	284 762	1	(W)	(W)	1
November	409 699	342 666	308 046	277 080	1	1	(W)	1
Average	405 982	351 894	296 946	271 441	(W)	(W)	(W)	1
Other employees:								
March	101 194	82 748	58 136	51 332	1	1	1	1
May	103 171	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
August	103 391	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
November	105 582	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Average	103 334	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Construction worker hours (thousands):								
January to March	173 183	142 204	(NA)	(NA)	1	(W)	(NA)	(NA)
April to June	179 844	147 077	(NA)	(NA)	1	(W)	(NA)	(NA)
July to September	192 009	150 301	(NA)	(NA)	1	1	(NA)	(NA)
October to December	187 083	145 642	(NA)	(NA)	1	1	(NA)	(NA)
Total hours worked	732 100	585 226	(NA)	(NA)	1	(W)	(NA)	(NA)
Payroll, all employees	12 663 516	9 106 563	5 482 519	3 792 682	(W)	(W)	(W)	1
Payroll, construction workers	9 621 993	7 346 536	4 496 695	3 151 047	(W)	(W)	(W)	1
Payroll, other employees	3 041 522	1 760 027	985 825	641 635	(W)	(W)	(W)	1
First quarter payroll, all employees	2 957 539	2 164 760	1 220 111	(NA)	1	(W)	(W)	(NA)
Employer costs for fringe benefits, all employees	2 962 599	1 619 494	1 094 744	(NA)	(W)	(W)	(W)	(NA)
Legally required expenditures	1 927 854	1 241 780	501 993	(NA)	1	(W)	(W)	(NA)
Voluntary expenditures	1 034 745	377 714	592 751	(NA)	1	(W)	(W)	(NA)
Dollar value of business done	36 275 257	26 441 085	14 481 842	9 608 035	(W)	(W)	(W)	1
Value of construction work[1]	35 838 226	25 948 527	14 221 277	9 448 861	(W)	(W)	(W)	1
Value of construction work subcontracted in from others	16 067 963	10 822 978	6 926 640	3 933 188	1	1	(W)	1
Land receipts[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other business receipts	437 030	492 558	260 565	159 154	2	1	2	2
Net value of construction work[1]	34 667 764	25 252 434	13 919 122	9 229 369	(W)	(W)	(W)	1
Value added[1]	21 816 585	15 122 619	8 748 490	5 796 631	(W)	(W)	(W)	1
Selected costs	14 458 671	11 318 466	5 733 353	3 811 404	1	(W)	(W)	1
Materials, components, and supplies[3]	12 788 495	10 234 565	5 239 950	3 591 892	(W)	(W)	(W)	1
Construction work subcontracted to others	1 180 462	696 092	302 156	219 512	3	1	2	3
Selected power, fuels, and lubricants	489 713	387 808	191 247	(NA)	1	1	1	(NA)
Electricity	81 132	56 613	27 989	(NA)	1	1	1	(NA)
Natural gas	16 935	13 679	8 881	(NA)	2	2	3	(NA)
Gasoline and diesel fuel	362 957	294 679	140 452	(NA)	1	1	1	(NA)
On highway use	337 671	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Off highway use	25 286	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Other, including lubricating oils and greases	29 588	22 836	13 926	(NA)	2	2	2	(NA)
Rental cost for machinery, equipment, and buildings	440 512	238 416	104 368	(NA)	1	1	1	(NA)
For machinery and equipment	201 939	133 087	59 322	36 028	1	1	*	3
For buildings	238 573	105 329	45 046	(NA)	1	1	1	(NA)
Selected purchased services	417 485	271 747	177 695	(NA)	1	1	3	(NA)
Communication services	198 070	119 242	74 206	(NA)	1	1	2	(NA)
Repairs to buildings and other structures	36 019	23 866	14 250	(NA)	2	1	2	(NA)
Repairs to machinery and equipment	183 395	128 638	89 439	(NA)	1	1	5	(NA)
Ownership of construction projects:								
Value of construction work[1]	35 838 226	25 948 527	14 221 277	9 448 861	(W)	(W)	(W)	1
Government owned	6 270 845	3 743 799	2 525 096	2 494 826	2	1	(W)	1
Federal	2 072 994	(NA)	(NA)	(NA)	4	(NA)	(NA)	(NA)
State and local	4 197 850	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Privately owned	29 567 381	22 204 727	11 696 182	6 954 053	1	(W)	(W)	1

[1]In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.
[2]Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.
[3]For 1972, includes data for power, fuels, and lubricants.

Table 3. Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	Relative standard error of estimate (percent) 1987	1982
BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT				
Beginning-of-year gross book value of depreciable assets	2 966 530	3 253 696	1	1
Capital expenditures, other than land	495 613	358 780	1	1
New	387 094	276 746	2	1
Used	108 519	82 033	4	2
Retirements and disposition of depreciable assets	125 186	112 500	2	2
End-of-year gross book value of depreciable assets	3 336 956	3 500 176	1	1
Depreciation charges during year	442 076	481 416	1	1
Buildings and other Structures, Additions, and Related Facilities				
Beginning-of-year gross book value of depreciable assets	774 678	546 701	2	1
Capital expenditures, other than land	80 805	55 009	4	2
New buildings and other structures	51 657	40 387	4	2
Used buildings and other structures	28 948	14 622	9	3
Retirements and disposition of depreciable assets	17 780	12 348	5	8
End-of-year gross book value of depreciable assets	837 503	589 363	2	1
Depreciation charges during year	77 985	90 696	2	1
Machinery and Equipment				
Beginning-of-year gross book value of depreciable assets	2 191 855	2 707 214	1	1
Capital expenditures, other than land	415 008	303 770	1	1
New machinery and equipment, including automobiles and trucks	335 437	236 359	2	1
New automobiles and trucks, intended primarily for highway use	226 797	133 077	2	2
Used machinery and equipment, including automobiles and trucks	79 570	67 411	3	2
Retirements and disposition of depreciable assets	107 408	100 151	2	1
End-of-year gross book value of depreciable assets	2 499 455	2 910 833	1	1
Depreciation charges during year	364 090	390 719	1	1

Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Establishments with payroll	Relative standard error of estimate (percent)
All establishments:		
Number	49 436	1
Value of construction work	35 838 226	(W)
Establishments with inventories:		
Number	26 180	2
Value of construction work	21 636 195	1
Inventories[1]:		
End of 1987, materials and supplies	732 885	2
End of 1986, materials and supplies	680 887	2
Establishments with no inventories:		
Number	16 338	2
Value of construction work	8 699 753	1
Establishments not reporting:		
Number	6 940	3
Value of construction work	5 502 278	1

[1]Inventories at cost or market prior to any adjustment to correct to LIFO values.

Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with an average of— 1 to 4 employees	5 to 9 employees	10 to 19 employees	20 to 49 employees	50 to 99 employees	100 to 249 employees	250 to 499 employees	500 to 999 employees	1,000 employees or more
1987										
Number of establishments	49 436	26 562	11 302	6 363	3 639	965	487	89	20	7
All employees**	509 309	54 411	72 593	84 775	107 146	85 776	71 886	30 252	12 615	9 871
Payroll, all employees	12 663 516	831 393	1 365 482	1 877 286	2 737 903	1 848 978	2 229 132	999 247	386 334	387 758
Construction worker hours (thousands)	732 100	89 366	93 311	117 300	153 762	101 173	114 614	47 610	19 953	15 009
Dollar value of business done	36 275 257	3 486 810	4 146 798	5 478 105	7 799 754	5 081 315	5 890 100	3 523 215	(D)	889 158
Value of construction work¹	35 838 226	3 432 481	4 088 965	5 402 040	7 675 104	5 029 064	5 805 988	2 542 384	1 862 198	(D)
Net value of construction work†	34 657 764	3 255 265	3 989 052	5 255 479	7 437 490	4 861 166	5 585 636	2 455 669	1 818 006	(D)
Value added††	21 816 585	1 916 741	2 434 840	3 248 485	4 610 927	2 961 120	3 623 087	1 728 709	644 269	648 406
Cost of materials, components, supplies, and fuels	13 278 209	1 372 853	1 612 044	2 083 058	2 951 214	1 952 296	2 048 661	1 260 082	(D)	(D)
Cost of construction work subcontracted to others	1 180 462	177 216	99 913	146 562	237 613	167 808	220 352	88 715	44 192	(D)
Rental cost for machinery, equipment, and buildings	440 512	37 084	60 982	75 430	94 495	52 908	64 557	30 754	15 098	9 203
Capital expenditures, other than land	495 613	66 757	84 657	101 202	108 618	59 053	43 282	18 501	13 562	(D)
End-of-year gross book value of depreciable assets	3 336 958	448 407	511 218	641 079	737 916	425 366	331 676	172 781	47 840	20 670
1982										
All employees**	434 764	46 771	52 462	66 214	79 453	49 280	51 889	28 174	23 217	37 303
Total construction receipts¹	25 948 527	2 242 850	2 460 674	3 520 472	4 882 394	3 360 482	3 487 329	2 264 339	1 975 617	1 954 368
Value added††	15 122 619	1 255 778	1 423 146	2 038 528	2 782 422	2 078 111	2 115 109	1 286 127	2 143 397	(D)
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)										
All employees**	1	2	2	2	1	(W)	(W)	(W)	(W)	(W)
Net value of construction work†	(W)	2	2	2	1	(W)	(W)	(W)	(W)	(D)
Capital expenditures, other than land	1	5	5	4	2	1	1	(W)	(W)	(D)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with dollar value of business done: Less than $25,000	$25,000 to $49,999	$50,000 to $99,999	$100,000 to $249,999	$250,000 to $499,999	$500,000 to $999,999	$1,000,000 to $2,499,999	$2,500,000 to $4,999,999	$5,000,000 to $9,999,999	$10,000,000 or more
1987											
Number of establishments	49 436	(S)	(S)	(S)	15 170	8 625	6 097	4 139	1 541	721	426
All employees**	509 309	(S)	(S)	(S)	48 865	55 374	59 061	90 135	68 343	60 642	96 863
Payroll, all employees	12 663 516	(S)	(S)	(S)	726 775	1 009 200	1 453 829	2 213 712	1 826 385	1 826 061	3 413 021
Construction worker hours (thousands)	732 100	(S)	(S)	(S)	61 480	73 045	94 948	130 806	100 071	95 154	154 121
Dollar value of business done	36 275 257	(S)	(S)	(S)	2 446 290	3 006 754	4 256 496	6 340 928	5 307 079	4 848 636	9 366 176
Value of construction work¹	35 838 226	(S)	(S)	(S)	2 423 291	2 961 243	4 196 781	6 248 725	5 227 696	4 780 523	9 305 177
Net value of construction work†	34 657 764	(S)	(S)	(S)	2 376 661	2 900 220	4 095 885	6 081 058	4 973 637	4 589 480	8 961 756
Value added††	21 816 585	(S)	(S)	(S)	1 390 618	1 782 985	2 503 198	3 748 820	3 087 759	2 917 043	6 015 924
Cost of materials, components, supplies, and fuels	13 278 209	(S)	(S)	(S)	1 011 241	1 162 746	1 652 402	2 424 440	1 985 280	1 740 550	3 006 831
Cost of construction work subcontracted to others	1 180 462	(S)	(S)	(S)	46 430	61 022	100 895	187 667	254 059	191 043	343 421
Rental cost for machinery, equipment, and buildings	440 512	(S)	(S)	(S)	30 780	42 740	59 999	82 917	55 858	53 623	106 050
Capital expenditures, other than land	495 613	(S)	(S)	(S)	50 179	62 194	87 825	95 470	76 084	47 187	81 579
End-of-year gross book value of depreciable assets	3 336 958	(S)	(S)	(S)	337 494	400 242	504 120	640 947	488 825	391 974	468 799
1982											
All employees**	434 764	4 852	4 948	14 679	43 695	45 601	51 652	88 132	45 837	41 447	113 919
Total construction receipts¹	25 948 527	43 791	108 785	504 183	1 771 331	2 127 257	2 644 990	4 079 292	3 010 406	2 826 428	8 832 062
Value added††	15 122 619	23 727	59 812	278 572	998 752	1 222 977	1 522 271	2 417 833	1 826 624	1 755 108	5 016 940
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees**	1	(S)	(S)	(S)	2	2	2	1	(W)	(W)	(W)
Net value of construction work†	(W)	(S)	(S)	(S)	2	2	2	1	1	(W)	(W)
Capital expenditures, other than land	1	(S)	(S)	(S)	5	6	5	3	3	(W)	(W)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work[1]				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction[2]	Maintenance and repair				
	A	B	C	D	A	B	C	D
1987								
Value of construction work[1]	**35 638 226**	**19 124 238**	**9 826 818**	**5 229 657**	**(W)**	**1**	**1**	**1**
Building construction	**29 096 983**	**16 570 385**	**8 141 801**	**4 343 881**	**(W)**	**1**	**1**	**1**
Single-family houses	4 164 610	2 775 371	757 296	633 943	1	1	2	2
Single-family houses, detached	3 460 344	2 234 563	673 924	551 856	1	2	2	3
Single-family houses, attached	704 266	538 807	83 371	82 087	2	2	5	4
Apartment buildings with two or more apartments	1 284 598	901 414	202 031	181 122	2	2	4	3
Other residential buildings, including hotels and motels	1 091 273	701 239	244 016	146 017	1	1	3	3
Hotels and motels	772 646	539 245	160 204	73 197	1	1	4	4
Other residential buildings, excluding hotels and motels	318 626	161 994	83 812	72 820	3	3	4	6
Office buildings	7 127 066	3 330 394	2 407 202	889 469	1	1	1	1
Other commercial buildings such as stores, restaurants, and automobile service stations	4 604 330	2 638 984	1 154 483	810 964	1	1	2	2
Industrial buildings and warehouses	6 548 566	3 436 696	1 941 105	1 170 762	1	1	1	1
Industrial buildings	5 580 302	2 815 151	1 733 725	1 031 425	1	1	1	1
Warehouses	968 264	621 547	207 380	139 337	1	2	2	2
Religious buildings	354 962	189 609	100 281	65 071	2	3	3	6
Educational buildings	1 246 465	685 961	423 927	136 576	1	2	2	3
Hospitals and institutional buildings	1 822 402	970 412	685 928	166 061	1	1	1	3
Farm buildings	127 201	39 593	45 911	41 696	6	7	12	6
Amusement, social, and recreational buildings	257 214	167 033	54 835	35 344	3	4	3	4
Other nonresidential buildings	427 401	235 771	124 781	66 848	3	3	5	7
Nonbuilding construction	**5 124 653**	**2 553 856**	**1 685 018**	**885 779**	**1**	**2**	**1**	**2**
Highways, streets, and related facilities	782 517	470 547	188 150	123 819	2	2	2	2
Power and communication transmission lines, towers, and related facilities	2 257 271	1 100 055	758 745	398 471	3	4	1	4
Mass transit construction	335 253	150 339	164 747	20 166	1	2	1	1
Subways	318 875	(D)	159 802	(D)	1	(D)	1	(D)
Railroads	16 377	(D)	4 944	(D)	(W)	(D)	(W)	(D)
Heavy industrial facilities	923 412	395 203	363 727	174 481	1	1	1	3
Blast furnaces, petroleum refineries, and chemical complexes	379 422	131 027	166 953	81 441	2	3	1	5
Power plants	543 989	254 175	196 774	93 039	1	1	1	2
Power plants, nuclear	143 961	53 095	66 954	23 910	(W)	(W)	(W)	(W)
Power plants, except nuclear	400 028	201 080	129 819	69 128	1	1	1	3
Sewage treatment and water treatment plants	173 221	120 576	35 443	17 200	4	5	5	10
Sewage treatment plants	126 912	86 381	27 795	12 735	5	5	5	9
Water treatment plants	46 308	34 195	7 648	4 464	8	7	10	22
Other nonbuilding construction	852 979	327 136	174 206	151 642	5	5	9	7
Construction work, n.s.k.	**1 657 513**	**(NA)**	**(NA)**	**(NA)**	**2**	**(NA)**	**(NA)**	**(NA)**
1982								
Value of construction work[1]	**25 948 527**	**19 511 108**	**(NA)**	**6 437 418**	**(W)**	**(W)**	**(NA)**	**(W)**
Building construction	**20 036 446**	**14 888 918**	**(NA)**	**5 147 530**	**(W)**	**(W)**	**(NA)**	**(W)**
Single-family houses	1 969 004	1 300 378	(NA)	668 626	1	2	(NA)	1
Single-family houses, detached	1 583 161	1 013 421	(NA)	569 740	1	2	(NA)	2
Single-family houses, attached	385 842	286 957	(NA)	98 885	2	3	(NA)	3
Apartment buildings with two or more apartments	981 790	774 460	(NA)	207 329	1	1	(NA)	3
Other residential buildings, including hotels and motels	535 583	414 842	(NA)	120 740	1	1	(NA)	2
Hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other residential buildings, excluding hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Office buildings	6 860 103	5 428 898	(NA)	1 431 205	(W)	(W)	(NA)	1
Other commercial buildings such as stores, restaurants, and automobile service stations	1 815 706	1 238 341	(NA)	577 365	1	1	(NA)	1
Industrial buildings and warehouses	5 076 330	3 591 037	(NA)	1 485 293	(W)	(W)	(NA)	1
Industrial buildings	4 489 743	3 153 415	(NA)	1 336 327	1	1	(NA)	1
Warehouses	586 586	437 621	(NA)	148 965	1	1	(NA)	2
Religious buildings	213 367	141 659	(NA)	71 708	3	3	(NA)	2
Educational buildings	783 475	594 745	(NA)	188 730	1	1	(NA)	2
Hospitals and institutional buildings	1 300 702	1 038 299	(NA)	262 402	1	1	(NA)	1
Amusement, social, and recreational buildings	209 420	169 671	(NA)	39 748	2	2	(NA)	2
Other nonresidential buildings	290 962	196 581	(NA)	94 379	2	2	(NA)	5
Nonbuilding construction	**4 262 932**	**3 361 885**	**(NA)**	**901 047**	**(W)**	**(W)**	**(NA)**	**1**
Highways, streets, and related facilities	547 636	425 980	(NA)	121 655	1	2	(NA)	2
Power and communication transmission lines, towers, and related facilities	1 325 773	1 106 352	(NA)	219 420	1	1	(NA)	2
Blast furnaces, petroleum refineries, and chemical complexes	412 419	284 320	(NA)	128 098	(W)	(W)	(NA)	1
Power plants	973 930	816 147	(NA)	157 783	(W)	(W)	(NA)	1
Power plants, nuclear	538 586	469 820	(NA)	68 766	(W)	(W)	(NA)	(W)
Power plants, except nuclear	435 344	346 326	(NA)	89 017	1	1	(NA)	1
Sewage treatment and water treatment plants	355 375	309 952	(NA)	45 423	1	1	(NA)	4
Sewage treatment plants	236 071	212 653	(NA)	25 418	1	1	(NA)	3
Water treatment plants	117 304	97 299	(NA)	20 004	2	2	(NA)	9
Other nonbuilding construction	647 787	419 120	(NA)	228 667	4	3	(NA)	7
Construction work, n.s.k.	**1 849 149**	**1 260 305**	**(NA)**	**388 841**	**2**	**2**	**(NA)**	**2**

[1]In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.
[2]In 1982, data for additions, alterations, or reconstruction were collected separately for SIC 1521, 1522, 1531, 1541, and 1542. For all other industries, data are included with "New construction."

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work subcontracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type						
	A	B	C	D	E	F	G	H	B	D	H
All establishments	**49 436**	**509 309**	**12 083 516**	**35 838 226**	**17 983 952**	**34 657 784**	**21 816 585**	**1 180 482**	**1**	**(W)**	**3**
Establishments not specializing by type	17 328	200 601	4 903 452	14 074 329	(NA)	13 673 486	8 272 711	400 862	1	1	5
Establishments specializing 51 percent or more	32 108	308 707	7 760 064	21 763 897	17 983 952	20 984 297	13 543 874	779 600	1	1	1
SINGLE-FAMILY HOUSES, DETACHED											
All establishments specializing in type	**11 146**	**49 427**	**827 075**	**2 638 627**	**2 112 267**	**2 588 158**	**1 524 732**	**40 467**	**2**	**2**	**10**
Establishments with —											
100 percent specialization	2 691	9 382	142 625	472 992	472 992	464 918	275 446	8 073	5	5	14
90 to 99 percent specialization	2 025	8 575	144 835	466 556	434 327	459 713	265 281	6 842	5	5	15
80 to 89 percent specialization	1 957	9 682	161 448	510 947	420 424	503 949	294 361	6 997	5	5	19
70 to 79 percent specialization	2 475	11 481	190 349	612 492	445 634	600 314	354 544	12 178	4	4	28
60 to 69 percent specialization	1 443	7 633	137 793	416 720	256 679	411 930	244 758	4 790	5	5	15
51 to 59 percent specialization	553	2 672	50 023	148 917	82 229	147 333	90 339	1 584	7	7	14
SINGLE-FAMILY HOUSES, ATTACHED											
All establishments specializing in type	**533**	**3 699**	**67 923**	**214 663**	**161 149**	**210 681**	**124 983**	**3 982**	**7**	**6**	**10**
Establishments with —											
100 percent specialization	88	389	7 035	17 621	17 621	17 558	11 112	63	24	25	12
90 to 99 percent specialization	73	416	8 462	26 141	23 828	25 819	16 532	321	19	17	14
80 to 89 percent specialization	106	606	10 126	36 403	29 448	35 293	17 919	1 110	17	16	32
70 to 79 percent specialization	135	1 122	18 795	67 095	49 006	65 391	40 980	1 703	14	11	5
60 to 69 percent specialization	84	774	17 406	51 049	32 127	50 451	29 948	598	14	12	15
51 to 59 percent specialization	44	350	6 097	16 352	9 117	16 166	8 809	*185	26	25	58
APARTMENT BUILDINGS WITH TWO OR MORE APARTMENTS											
All establishments specializing in type	**867**	**8 849**	**183 949**	**568 576**	**436 120**	**551 570**	**324 253**	**17 006**	**4**	**3**	**8**
Establishments with —											
100 percent specialization	157	1 548	34 880	106 495	106 495	103 417	62 370	3 077	9	9	15
90 to 99 percent specialization	127	1 072	18 678	60 925	56 927	58 989	31 842	1 936	15	14	29
80 to 89 percent specialization	220	955	18 489	57 800	47 098	51 980	32 114	5 819	13	10	18
70 to 79 percent specialization	177	2 461	53 025	158 480	115 448	155 806	92 553	2 673	7	5	16
60 to 69 percent specialization	124	1 922	41 009	129 721	80 202	127 034	80 783	2 686	9	6	8
51 to 59 percent specialization	60	889	17 868	55 154	29 947	54 341	24 588	812	11	9	30
HOTELS AND MOTELS											
All establishments specializing in type	**181**	**1 871**	**43 819**	**140 716**	**109 850**	**137 376**	**77 378**	**3 339**	**11**	**8**	**18**
Establishments with —											
100 percent specialization	*26	159	5 742	19 970	19 970	19 242	12 070	728	23	15	18
90 to 99 percent specialization	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
80 to 89 percent specialization	52	617	16 127	55 923	45 036	54 815	29 929	1 107	9	10	21
70 to 79 percent specialization	33	476	9 279	32 614	24 110	31 231	17 941	1 383	32	23	39
60 to 69 percent specialization	47	417	8 170	18 265	11 153	(D)	10 923	(D)	24	21	(D)
51 to 59 percent specialization	*30	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
OTHER RESIDENTIAL BUILDINGS, EXCLUDING HOTELS AND MOTELS											
All establishments specializing in type	**174**	**1 276**	**27 726**	**80 778**	**64 984**	**77 724**	**51 020**	**3 054**	**10**	**8**	**18**
Establishments with —											
100 percent specialization	51	297	5 285	18 002	18 002	17 186	10 634	*815	25	24	61
90 to 99 percent specialization	9	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
80 to 89 percent specialization	54	369	9 283	29 367	25 118	28 670	19 107	696	15	10	28
70 to 79 percent specialization	*24	223	3 756	9 648	6 887	9 622	5 548	26	26	23	31
60 to 69 percent specialization	*32	276	6 881	16 257	10 202	14 787	11 045	1 470	19	16	5
51 to 59 percent specialization	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
OFFICE BUILDINGS											
All establishments specializing in type	**2 936**	**50 716**	**1 983 589**	**5 072 584**	**3 936 569**	**4 942 874**	**3 273 027**	**129 910**	**1**	**1**	**2**
Establishments with —											
100 percent specialization	595	9 831	302 908	820 715	820 715	800 544	529 673	20 170	3	3	5
90 to 99 percent specialization	560	6 994	250 291	590 365	556 207	579 493	377 379	10 871	3	3	5
80 to 89 percent specialization	418	9 520	311 089	824 958	677 467	803 082	509 996	21 875	2	1	4
70 to 79 percent specialization	587	18 798	689 816	1 636 797	1 185 614	1 600 903	1 109 704	35 893	1	1	2
60 to 69 percent specialization	554	10 198	316 193	837 345	517 311	809 327	524 599	28 017	2	2	4
51 to 59 percent specialization	224	4 374	133 289	362 403	199 254	349 321	221 673	13 082	4	3	4
OTHER COMMERCIAL BUILDINGS SUCH AS STORES, RESTAURANTS, AND AUTOMOBILE SERVICE STATIONS											
All establishments specializing in type	**3 627**	**33 948**	**786 410**	**2 340 258**	**1 839 679**	**2 277 783**	**1 378 973**	**62 474**	**2**	**2**	**5**
Establishments with —											
100 percent specialization	1 050	7 852	184 683	558 547	558 547	541 836	341 260	16 710	4	4	17
90 to 99 percent specialization	371	3 595	84 095	259 589	242 534	250 987	148 199	8 602	6	6	15
80 to 89 percent specialization	476	5 292	117 941	346 307	284 810	340 363	206 353	5 943	5	4	7
70 to 79 percent specialization	631	5 968	133 670	390 414	284 611	375 347	225 661	15 067	5	4	6
60 to 69 percent specialization	678	7 325	177 946	518 637	322 727	505 877	302 036	12 759	5	4	3
51 to 59 percent specialization	418	3 890	87 073	266 762	146 448	263 372	156 562	3 390	6	5	9

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987—Con.

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work: For all types	Value of construction work: For specialized type	Net value of construction work†	Value added††	Cost of construction work subcontracted to others	Relative standard error of estimate (percent) for column—		
	A	B	C	D	E	F	G	H	B	D	H
INDUSTRIAL BUILDINGS											
All establishments specializing in type	**3 170**	**48 787**	**1 378 450**	**3 589 833**	**2 868 735**	**3 451 567**	**2 262 787**	**138 265**	**1**	**1**	**2**
Establishments with —											
100 percent specialization	887	11 512	336 839	926 224	926 224	883 903	593 265	42 620	3	2	3
90 to 99 percent specialization	319	6 725	189 164	456 447	432 348	441 437	290 638	15 009	4	3	3
80 to 89 percent specialization	552	7 192	193 096	535 136	441 639	513 306	311 633	21 830	3	3	2
70 to 79 percent specialization	656	9 925	263 143	662 210	476 699	632 579	421 220	19 631	2	2	5
60 to 69 percent specialization	541	7 793	214 072	589 973	366 783	571 264	370 784	18 708	3	3	6
51 to 59 percent specialization	212	5 636	182 131	429 841	235 043	409 375	275 044	20 466	3	3	2
WAREHOUSES											
All establishments specializing in type	**169**	**1 725**	**41 174**	**122 485**	**90 436**	**120 247**	**67 918**	**2 218**	**9**	**9**	**15**
Establishments with —											
100 percent specialization	42	337	7 051	20 677	20 677	20 282	11 997	395	27	29	26
90 to 99 percent specialization	*22	*170	*3 183	*11 271	*10 450	11 119	5 671	(S)	48	42	(S)
80 to 89 percent specialization	*21	178	6 196	17 433	14 454	16 777	9 339	655	20	22	40
70 to 79 percent specialization	47	299	7 864	21 909	15 634	21 724	14 219	185	20	22	38
60 to 69 percent specialization	*19	325	6 857	21 177	12 763	20 871	11 071	305	19	13	18
51 to 59 percent specialization	15	414	10 040	29 997	16 455	29 472	15 618	524	12	11	9
EDUCATIONAL BUILDINGS											
All establishments specializing in type	**591**	**4 814**	**106 425**	**234 919**	**245 876**	**320 975**	**174 729**	**13 944**	**6**	**5**	**11**
Establishments with —											
100 percent specialization	56	491	8 074	30 706	30 706	29 617	17 815	2 088	26	21	35
90 to 99 percent specialization	96	506	11 333	32 431	29 746	31 256	18 728	1 175	17	16	15
80 to 89 percent specialization	164	1 019	24 203	66 813	55 429	62 839	31 190	3 974	12	12	27
70 to 79 percent specialization	117	927	18 316	56 328	41 435	54 216	30 642	2 111	18	13	23
60 to 69 percent specialization	103	1 249	30 876	95 427	59 060	93 566	47 730	1 860	8	6	7
51 to 59 percent specialization	52	618	13 621	53 212	29 469	50 478	28 620	2 734	16	15	26
HOSPITALS AND INSTITUTIONAL BUILDINGS											
All establishments specializing in type	**482**	**6 486**	**179 247**	**584 102**	**419 583**	**549 578**	**349 558**	**34 524**	**3**	**3**	**8**
Establishments with —											
100 percent specialization	85	630	17 489	50 354	50 354	49 147	30 385	*1 206	15	17	53
90 to 99 percent specialization	95	514	11 706	43 536	40 618	36 029	20 058	7 506	17	16	21
80 to 89 percent specialization	82	1 025	26 045	98 661	81 700	87 623	59 069	11 038	7	7	17
70 to 79 percent specialization	109	1 369	36 585	109 369	80 591	102 675	63 369	6 692	7	7	17
60 to 69 percent specialization	101	1 786	53 272	150 997	94 256	145 059	86 942	5 938	5	4	8
51 to 59 percent specialization	36	1 181	34 149	131 184	72 161	129 042	89 732	2 142	5	3	4
FARM BUILDINGS											
All establishments specializing in type	**205**	**477**	**5 455**	**33 061**	**23 199**	**29 708**	**20 101**	***3 353**	**20**	**26**	**45**
Establishments with —											
100 percent specialization	9	*18	106	*819	*819	*780	301	39	58	55	19
90 to 99 percent specialization	43	*31	*340	*2 175	*1 957	*2 175	*1 298	–	46	63	–
80 to 89 percent specialization	8	(S)	(S)	(S)	(S)	(S)	(S)	–	(S)	(S)	–
70 to 79 percent specialization	*30	192	2 959	12 698	*9 877	9 578	*7 180	*3 120	37	40	48
60 to 69 percent specialization	93	203	1 764	*14 529	*8 765	*14 475	*9 886	*54	27	48	47
51 to 59 percent specialization	*22	*18	*186	*2 192	*1 261	*2 052	*1 150	*140	51	47	54
HIGHWAYS, STREETS, AND RELATED FACILITIES											
All establishments specializing in type	**302**	**5 430**	**150 984**	**535 385**	**481 181**	**504 932**	**298 173**	**30 453**	**4**	**3**	**4**
Establishments with —											
100 percent specialization	195	2 961	80 495	307 851	307 851	296 085	167 348	21 765	6	4	5
90 to 99 percent specialization	26	547	14 481	49 836	45 632	47 625	30 926	2 210	6	9	13
80 to 89 percent specialization	37	730	21 169	66 167	56 515	67 121	39 313	1 045	8	6	12
70 to 79 percent specialization	14	317	8 803	28 921	20 948	28 321	15 373	600	13	11	(W)
60 to 69 percent specialization	20	603	17 882	55 423	36 015	52 071	30 840	3 351	10	9	5
51 to 59 percent specialization	8	270	8 171	25 186	14 018	23 706	14 371	1 480	11	11	11
POWER AND COMMUNICATION TRANSMISSION LINES, TOWERS, AND RELATED FACILITIES											
All establishments specializing in type	**948**	**27 710**	**771 275**	**2 137 959**	**2 071 381**	**1 960 519**	**1 552 653**	**177 440**	**1**	**3**	**19**
Establishments with —											
100 percent specialization	817	24 214	669 353	1 865 439	1 865 439	1 708 135	1 374 389	157 304	2	3	22
90 to 99 percent specialization	29	1 008	26 416	78 826	72 599	68 881	41 320	8 185	4	2	(W)
80 to 89 percent specialization	5	153	5 541	12 795	10 323	(D)	8 386	(D)	(W)	(W)	(D)
70 to 79 percent specialization	53	1 151	33 663	98 663	72 090	90 111	67 748	8 572	3	3	1
60 to 69 percent specialization	33	902	27 022	59 335	37 058	57 673	45 738	1 662	8	8	5
51 to 59 percent specialization	9	279	8 977	24 879	13 849	(D)	15 069	(D)	11	11	(D)
BLAST FURNACES, PETROLEUM REFINERIES, AND CHEMICAL COMPLEXES											
All establishments specializing in type	**129**	**4 119**	**107 158**	**241 365**	**216 527**	**235 272**	**172 062**	**6 093**	**3**	**3**	**8**
Establishments with —											
100 percent specialization	66	2 696	67 026	147 411	147 411	144 317	99 247	3 093	3	3	18
90 to 99 percent specialization	*21	188	4 504	11 474	10 819	11 390	9 122	84	19	20	10
80 to 89 percent specialization	*13	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
70 to 79 percent specialization	15	731	20 302	46 208	33 786	45 395	36 959	813	9	7	3
60 to 69 percent specialization	11	358	10 981	25 790	17 058	24 055	19 701	1 735	14	11	5
51 to 59 percent specialization	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

Table 9. **Quarterly Construction Worker Hours and Employment for Establishments With**

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Number of establishments	Average number of construction workers	Construction worker hours (thousands)	January to March		April to June	
				Construction workers[1]	Hours worked (thousands)	Construction workers[1]	Hours worked (thousands)
	A	B	C	D	E	F	G
United States	**49 436**	**405 982**	**732 100**	**395 113**	**173 163**	**396 921**	**179 844**
Alabama	600	5 572	10 259	5 622	2 524	5 550	2 577
Alaska	147	680	1 184	644	298	737	320
Arizona	877	6 497	11 328	6 193	2 529	6 367	2 822
Arkansas	415	2 106	3 730	2 080	870	2 114	939
California	5 753	44 989	76 374	43 241	18 010	44 975	19 180
Colorado	889	6 429	10 891	6 213	2 559	6 171	2 665
Connecticut	1 017	6 768	12 299	6 383	2 910	6 461	2 998
Delaware	155	1 281	2 116	1 244	506	1 262	529
District of Columbia	38	1 369	2 650	1 345	627	1 375	676
Florida	3 073	29 343	53 662	28 999	12 927	28 704	13 030
Georgia	1 216	13 821	25 789	13 403	6 074	13 370	6 327
Hawaii	221	1 538	2 917	1 667	776	1 495	694
Idaho	218	846	1 225	843	297	799	302
Illinois	1 661	18 903	35 392	18 119	8 277	18 238	8 712
Indiana	868	7 658	14 335	7 437	3 356	7 398	3 536
Iowa	481	2 607	4 695	2 552	1 103	2 477	1 157
Kansas	425	3 495	6 568	3 192	1 445	3 370	1 572
Kentucky	601	4 480	8 169	4 080	1 802	4 219	1 886
Louisiana	786	6 356	11 435	6 197	2 777	5 981	2 665
Maine	355	1 627	3 131	1 472	659	1 632	775
Maryland	963	11 859	21 012	11 570	4 948	11 537	5 063
Massachusetts	1 807	13 798	24 920	13 464	6 028	13 704	6 123
Michigan	1 568	11 800	21 633	11 448	5 103	11 678	5 456
Minnesota	945	6 823	12 243	6 422	2 625	6 607	2 974
Mississippi	330	1 804	2 921	1 813	727	1 820	734
Missouri	808	7 076	12 162	7 038	2 975	6 870	3 011
Montana	172	560	892	646	223	539	233
Nebraska	404	2 032	3 808	1 903	858	1 894	890
Nevada	247	2 211	4 323	2 183	983	2 173	1 043
New Hampshire	418	2 021	3 978	1 900	904	2 023	976
New Jersey	2 246	16 725	30 336	16 449	7 287	16 394	7 480
New Mexico	412	2 117	3 662	2 122	878	2 055	932
New York	3 599	36 913	68 001	36 141	16 087	35 873	16 769
North Carolina	1 619	13 408	24 958	12 630	5 716	13 256	6 230
North Dakota	219	741	1 496	620	281	665	333
Ohio	1 613	12 989	23 504	12 190	5 383	12 051	5 494
Oklahoma	593	3 070	5 396	3 064	1 366	3 123	1 367
Oregon	514	3 214	5 065	2 898	1 155	3 480	1 229
Pennsylvania	2 035	16 354	30 688	15 892	7 290	16 208	7 607
Rhode Island	287	1 469	2 632	1 425	616	1 390	655
South Carolina	645	7 976	15 169	8 864	4 116	7 532	3 540
South Dakota	170	579	841	546	185	558	202
Tennessee	727	9 215	16 560	9 178	3 869	8 907	4 015
Texas	3 153	25 861	45 756	25 296	11 025	25 180	11 277
Utah	323	2 048	3 677	2 047	887	1 946	858
Vermont	202	809	1 521	779	364	812	380
Virginia	1 272	12 053	22 257	11 699	5 171	12 019	5 562
Washington	912	6 596	10 976	6 507	2 586	6 552	2 762
West Virginia	201	1 419	2 411	1 287	533	1 277	550
Wisconsin	853	5 527	9 759	5 273	2 181	5 362	2 378
Wyoming	136	737	1 371	686	308	737	333

[1]Construction workers during pay periods including 12th of March, May, August, and November.

Payroll by State: 1987

July to September		October to December		Relative standard error of estimate (percent) for column–										Location of establishment
Construction workers[1]	Hours worked (thousands)	Construction workers[1]	Hours worked (thousands)											
H	I	J	K	B	C	D	E	F	G	H	I	J	K	
432 196	**192 009**	**409 699**	**187 083**	**(W)**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**U.S.**
5 709	2 647	5 409	2 509	4	6	4	5	4	6	4	6	5	7	AL
757	327	580	268	7	9	9	11	8	9	9	10	7	9	AK
6 924	3 005	6 504	2 969	4	5	4	5	4	5	4	5	5	6	AZ
2 227	995	2 024	925	8	10	8	11	8	11	8	10	8	11	AR
46 511	20 077	45 228	19 105	1	2	1	2	2	2	1	2	2	2	CA
6 613	2 829	6 719	2 835	3	4	3	4	3	4	3	4	3	4	CO
6 971	3 215	7 256	3 175	4	5	4	5	4	5	4	5	5	5	CT
1 354	543	1 265	537	7	10	8	11	8	11	7	10	7	10	DE
1 395	679	1 363	667	4	6	3	5	4	6	4	6	4	6	DC
29 957	13 773	29 710	13 931	2	3	2	3	2	3	2	3	2	3	FL
14 446	6 734	14 066	6 653	2	3	2	3	2	3	3	3	3	3	GA
1 512	747	1 477	698	7	10	12	14	6	9	7	10	7	10	HI
998	336	745	288	11	16	12	17	11	16	16	16	11	17	ID
19 586	9 223	19 666	9 179	2	2	2	2	2	2	2	2	2	2	IL
8 002	3 817	7 795	3 623	3	5	3	4	3	5	4	5	3	5	IN
2 719	1 197	2 683	1 236	6	8	6	8	6	8	6	8	6	8	IA
3 833	1 820	3 587	1 730	5	7	5	7	5	7	5	7	5	7	KS
4 915	2 246	4 626	2 233	5	7	5	7	5	7	5	8	5	7	KY
6 585	2 940	6 668	3 050	3	5	3	5	4	5	4	5	4	5	LA
1 673	823	1 733	872	8	11	9	12	8	12	8	11	8	11	ME
12 074	5 419	12 255	5 580	2	4	2	3	2	3	3	4	3	4	MD
14 684	6 548	13 342	6 219	2	3	2	3	2	3	2	3	2	3	MA
12 337	5 766	11 739	5 307	3	3	3	4	3	3	3	3	3	3	MI
7 345	3 317	6 919	3 126	3	4	3	4	3	4	3	4	3	4	MN
1 675	734	1 709	724	9	12	9	12	9	12	9	12	10	13	MS
7 444	3 222	6 955	2 953	3	4	3	4	3	4	3	4	3	4	MO
559	227	497	207	12	16	12	16	12	16	13	18	14	19	MT
2 108	1 020	2 224	1 039	5	8	6	9	6	8	6	8	5	7	NE
2 227	1 137	2 259	1 159	9	11	9	11	10	11	8	10	9	12	NV
2 090	1 006	2 072	1 091	7	9	7	9	7	9	7	9	7	9	NH
17 097	7 849	16 961	7 719	2	3	2	3	2	3	2	3	2	3	NJ
2 169	935	2 123	915	6	8	7	8	6	9	7	8	7	8	NM
38 499	17 934	37 141	17 209	1	2	2	2	1	2	1	2	1	2	NY
14 366	6 685	13 382	6 325	3	4	3	3	3	4	3	4	3	4	NC
873	456	808	425	11	15	12	17	11	16	12	15	11	15	ND
13 781	6 246	13 936	6 399	2	3	3	3	3	3	3	3	2	3	OH
3 213	1 372	2 878	1 290	7	8	7	8	7	8	7	8	7	9	OK
3 199	1 302	3 279	1 378	7	7	6	9	15	7	6	7	5	7	OR
16 802	7 996	16 512	7 794	2	3	2	3	2	3	2	3	2	3	PA
1 575	695	1 485	664	9	11	9	10	9	11	10	11	9	11	RI
8 038	3 908	7 479	3 705	3	4	3	3	3	4	3	4	3	4	SC
617	220	595	233	17	22	17	21	17	22	18	23	17	22	SD
9 579	4 358	9 197	4 318	3	4	3	3	3	4	3	4	3	4	TN
26 657	12 044	25 534	11 410	2	3	2	2	2	3	2	3	2	3	TX
2 137	951	2 061	979	7	10	7	10	7	10	8	11	8	12	UT
835	390	811	386	12	14	12	15	12	15	12	14	12	15	VT
12 492	5 936	11 800	5 586	3	3	2	3	2	3	3	4	3	4	VA
6 732	2 798	6 594	2 829	3	4	3	4	3	5	4	5	4	5	WA
1 504	658	1 611	669	9	12	9	13	9	13	9	13	8	10	WV
5 829	2 641	5 645	2 557	4	5	4	5	4	5	4	5	4	5	WI
750	349	772	379	11	17	10	15	10	15	12	17	15	21	WY

Table 10. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of construction work	1987					1982 construction receipts for work done in this State[1]	Percent change 1987 (col A) to 1982 (col F)	Relative standard error of estimate (percent) for column —		
	Value of construction work done in this State[1]	Construction work done by establishments located in this State		Construction work done by establishments not located in this State						
		Number	Value of construction work	Number	Value of construction work					
	A	B	C	D	E	F	G	A	C	E
United States	**35 838 226**	**49 169**	**32 913 524**	**9 643**	**2 924 702**	**25 948 527**	**38.1**	**(W)**	**(W)**	**1**
Alabama	412 516	596	338 709	277	73 807	238 734	72.8	4	4	1
Alaska	119 830	146	100 821	22	19 009	278 031	-56.9	6	7	8
Arizona	555 102	868	494 234	140	60 867	356 692	55.6	3	3	3
Arkansas	160 293	406	126 633	139	31 820	108 085	48.3	6	8	9
California	4 943 977	5 748	4 802 830	214	141 147	3 323 356	48.8	2	2	3
Colorado	491 077	885	454 960	80	36 117	611 151	-19.6	3	3	2
Connecticut	677 352	1 015	623 890	141	53 461	413 838	63.7	3	3	4
Delaware	149 138	155	101 796	177	47 341	93 556	59.4	4	6	5
District of Columbia	206 359	36	52 930	307	153 428	182 000	13.4	3	6	4
Florida	2 020 666	3 031	1 876 978	313	141 687	1 351 386	49.5	2	2	2
Georgia	1 031 189	1 205	882 265	525	148 903	567 871	81.6	2	2	2
Hawaii	214 122	221	196 579	32	15 543	121 419	76.3	5	5	6
Idaho	85 424	215	55 572	63	9 851	93 166	-29.8	9	11	7
Illinois	1 979 707	1 878	1 896 112	278	81 595	1 333 043	48.5	1	1	3
Indiana	631 631	887	603 137	277	28 493	469 449	34.5	3	3	7
Iowa	196 639	478	178 569	118	18 068	216 050	-9.0	6	6	6
Kansas	311 137	423	242 345	198	68 791	231 181	34.6	4	5	2
Kentucky	324 919	584	271 412	282	53 506	235 528	38.0	4	4	3
Louisiana	479 179	765	447 710	134	31 468	778 840	-38.5	3	3	5
Maine	137 439	355	123 077	122	14 362	78 233	75.7	7	8	7
Maryland	838 040	959	717 728	254	120 311	430 296	94.8	3	4	3
Massachusetts	1 162 804	1 805	1 110 111	214	52 692	584 898	98.8	2	2	4
Michigan	1 189 596	1 550	1 142 260	188	47 326	700 892	69.7	2	2	3
Minnesota	887 994	945	539 485	93	58 508	488 616	48.9	3	3	3
Mississippi	160 156	327	122 004	156	38 152	164 878	-2.9	6	8	3
Missouri	710 370	787	632 698	239	77 671	431 904	64.5	2	2	4
Montana	46 841	171	41 928	39	4 913	74 310	-37.0	11	12	21
Nebraska	172 645	402	150 344	103	28 300	140 003	27.8	7	7	18
Nevada	248 587	245	208 012	111	40 574	174 618	42.4	5	7	3
New Hampshire	185 816	418	148 046	228	37 770	74 181	150.5	6	7	6
New Jersey	1 509 798	2 226	1 397 174	489	112 623	922 825	63.6	2	2	5
New Mexico	195 795	412	178 175	65	17 620	191 177	2.4	5	5	8
New York	3 838 810	3 588	3 736 058	314	102 751	2 212 374	73.5	1	1	4
North Carolina	848 401	1 616	752 758	275	95 643	464 067	82.8	2	3	3
North Dakota	61 365	218	49 250	90	12 114	109 597	-44.0	10	12	5
Ohio	1 181 150	1 603	1 105 619	217	75 531	829 711	42.5	2	2	5
Oklahoma	256 537	593	215 764	192	40 773	407 361	-37.0	5	6	8
Oregon	294 254	514	267 833	112	26 421	264 107	11.4	5	5	6
Pennsylvania	1 451 246	2 030	1 369 001	368	82 244	1 048 079	38.5	2	2	5
Rhode Island	125 858	287	113 315	88	12 343	58 285	89.8	7	8	20
South Carolina	437 970	836	350 209	259	87 760	291 249	90.4	3	4	5
South Dakota	51 614	170	38 659	104	12 955	45 414	13.7	12	15	7
Tennessee	550 887	721	507 820	154	43 066	370 092	48.9	3	3	11
Texas	1 933 371	3 147	1 843 316	292	90 054	2 378 878	-18.7	2	2	6
Utah	171 571	323	150 163	89	21 408	155 887	10.1	6	9	6
Vermont	80 999	202	57 578	57	23 421	49 748	62.8	10	14	6
Virginia	1 000 649	1 249	796 658	483	203 991	517 821	93.2	2	3	3
Washington	844 722	911	593 116	172	51 606	673 825	-4.3	3	3	3
West Virginia	127 264	192	86 288	185	40 975	139 616	-8.8	6	9	4
Wisconsin	480 774	853	462 853	144	17 920	358 699	34.0	3	3	3
Wyoming	68 893	138	50 714	88	18 178	126 512	-45.5	13	11	37

[1] In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 11. Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Primary and other kinds of business activities	Dollar value of business done[1]		Relative standard error of estimate (percent)	
	1987	1982	1987	1982
All kinds of business	**36 275 257**	**26 441 085**	**(W)**	**(W)**
General building contractor	44 121	32 357	12	8
Heavy construction	76 944	113 010	3	6
Heavy construction contractor	56 880	(NA)	2	(NA)
Cable laying contractor	20 064	(NA)	9	(NA)
Air-conditioning contractor	18 464	85 654	11	4
Heating contractor	17 449	64 834	10	3
Mechanical contractor	56 161	72 386	2	(W)
Plumbing contractor	42 196	63 351	9	4
Heating, ventilation, and air-conditioning contractor	56 058	(NA)	5	(NA)
Electrical contractor	29 125 842	25 384 315	(W)	(W)
Electric power contractor	26 602 277	(NA)	1	(NA)
Electronic control system contractor	1 673 570	(NA)	1	(NA)
Highway lighting and signal contractor	849 995	(NA)	2	(NA)
Fire and security systems contractors	1 959 773	(NA)	1	(NA)
Telecommunications contractor	3 860 192	(NA)	1	(NA)
Millwright	11 689	11 031	2	9
Other construction activities	261 478	242 524	4	5
Manufacturing	33 640	34 981	5	3
Retail trade	159 116	93 847	3	3
Wholesale trade	58 992	34 844	4	1
Other activities	182 839	5 398	2	4
Kind of business activity, n.a.k.	310 304	202 553	6	4

[1] In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 12. Selected Industry Ratios for Establishments With Payroll: 1987 and 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics		1987	1982	Relative standard error of estimate (percent) for 1987
AVERAGE PER ESTABLISHMENT				
Number of employees[*]		10.3	11.0	1
Number of construction workers		8.2	8.9	1
Number of all other employees		2.1	(NA)	1
Payroll, all employees	$1,000	256.2	230.2	1
Payroll, construction workers	do.	194.6	185.7	1
Payroll, other employees	do.	61.5	44.5	1
Dollar value of business done	do.	733.8	688.3	1
Value of construction work[1]	do.	724.9	655.9	1
Cost of materials, components, supplies, and fuels	do.	268.6	268.5	1
Construction work subcontracted to others	do.	23.9	17.6	3
Rental cost for machinery, equipment, and buildings	do.	8.9	6.0	2
Capital expenditures, other than land	do.	10.0	9.1	2
Gross book value of depreciable assets	do.	67.5	68.5	1
AVERAGE PER EMPLOYEE				
Payroll, all employees	do.	24.9	20.9	(W)
Dollar value of business done	do.	71.2	60.8	(W)
Value added[†]	do.	42.8	34.9	(W)
AVERAGE PER CONSTRUCTION WORKER				
Payroll, construction workers	do.	23.7	20.9	(W)
Value of construction work[1]	do.	88.3	73.7	(W)
Construction worker hours		1,860.3	1,883.1	(W)
AVERAGE PER OTHER EMPLOYEE				
Payroll, other employees	$1,000	29.4	(NA)	(W)
AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK[1]				
Payroll, all employees		.353	.351	(W)
Cost of materials, components, supplies, and fuels		.371	.409	(W)
Cost of construction work subcontracted to others		.033	.027	3
Rental cost for machinery, equipment, and buildings		.012	.009	1

[1] In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Average number of employees** per establishment	Payroll per employee ($1,000)	Construction worker hours per construction worker	Value of construction work per construction worker ($1,000)	Average per dollar of value of construction work			
					Payroll, all employees	Cost of materials, components, supplies, and fuels	Cost of construction work subcontracted to others	Rental cost for machinery, equipment, and buildings
United States	**10.3**	**24.9**	**1 883.3**	**88.3**	**.353**	**.371**	**.033**	**.012**
Alabama	11.4	19.0	1 841.2	72.1	322	405	048	009
Alaska	6.2	37.5	1 741.2	149.5	308	345	* 029	021
Arizona	9.5	19.5	1 743.6	80.1	312	429	029	017
Arkansas	6.6	17.4	1 771.1	75.0	301	445	043	011
California	10.0	27.6	1 897.6	108.2	328	370	056	014
Colorado	9.2	23.4	1 894.0	88.2	307	380	024	015
Connecticut	8.4	27.2	1 817.2	94.8	360	341	021	010
Delaware	10.5	23.1	1 651.8	84.7	346	372	023	013
District of Columbia	42.9	32.9	1 905.7	88.8	441	212	035	007
Florida	11.8	18.6	1 829.8	68.1	337	414	031	012
Georgia	13.7	22.2	1 865.9	73.4	364	399	025	012
Hawaii	8.8	28.6	1 896.6	129.1	291	386	039	017
Idaho	5.1	17.3	1 448.0	73.1	313	455	017	008
Illinois	12.6	32.2	1 872.3	104.3	386	341	027	010
Indiana	10.8	25.1	1 871.9	80.3	377	353	030	011
Iowa	6.8	20.4	1 800.9	79.4	325	447	017	011
Kansas	10.7	24.2	1 879.3	88.6	354	373	030	013
Kentucky	9.2	19.6	1 831.6	73.9	330	396	060	013
Louisiana	10.3	21.5	1 798.5	77.6	344	357	027	013
Maine	5.8	19.9	1 924.4	80.5	314	408	011	009
Maryland	15.2	22.5	1 771.8	79.5	350	387	018	011
Massachusetts	9.4	25.6	1 806.1	87.2	364	370	021	009
Michigan	9.6	29.5	1 833.3	104.1	362	341	034	011
Minnesota	9.1	29.1	1 794.4	100.8	363	367	022	011
Mississippi	6.9	18.0	1 819.2	70.4	324	399	040	012
Missouri	11.3	27.3	1 718.8	98.7	358	358	025	011
Montana	4.4	19.8	1 582.9	78.9	339	387	025	011
Nebraska	6.5	22.1	1 874.0	86.2	334	387	046	009
Nevada	11.2	26.5	1 955.2	110.4	300	350	066	022
New Hampshire	6.2	20.5	1 968.3	82.2	322	435	009	010
New Jersey	9.2	27.4	1 813.8	90.0	377	353	029	012
New Mexico	6.8	21.1	1 729.8	97.8	286	398	062	011
New York	12.7	31.8	1 842.2	103.0	381	311	022	010
North Carolina	10.1	18.2	1 881.4	85.7	337	436	044	014
North Dakota	4.5	18.6	2 018.9	76.0	323	446	022	014
Ohio	10.1	26.0	1 809.5	89.4	365	380	030	010
Oklahoma	8.8	19.8	1 757.7	75.4	343	402	048	015
Oregon	8.2	23.6	1 575.9	83.9	330	397	036	012
Pennsylvania	10.2	27.7	1 876.5	93.6	374	336	036	011
Rhode Island	8.6	25.9	1 791.7	94.5	352	397	021	010
South Carolina	14.8	18.5	1 901.4	57.1	388	357	034	018
South Dakota	4.3	15.4	1 462.5	69.3	280	466	022	012
Tennessee	15.1	23.5	1 797.1	70.4	389	375	034	013
Texas	10.4	21.0	1 783.2	80.5	334	387	030	015
Utah	8.1	23.0	1 795.4	94.0	312	452	040	017
Vermont	5.2	19.5	1 880.1	81.5	312	452	006	010
Virginia	11.7	20.9	1 846.6	78.7	338	400	026	014
Washington	9.4	26.1	1 864.0	96.8	350	404	032	018
West Virginia	8.7	22.1	1 699.1	67.7	400	340	010	009
Wisconsin	8.4	25.1	1 766.7	87.6	370	401	018	010
Wyoming	7.0	20.3	1 880.2	78.1	351	427	015	019

APPENDIX A.
Explanation of Terms

Construction—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

Number of establishments in business during year—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

Proprietors and working partners—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

All employees—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

Construction workers—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

Other employees—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

Construction worker hours—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

Payroll—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

Employer costs for fringe benefits (supplemental labor costs)—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

Legally required contributions—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

Voluntary payments—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

Value of construction work done—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.

Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

Land receipts—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

Other business receipts—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

Net value of construction work—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Value added—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Selected costs—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects.

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

Rental costs for machinery, equipment, and buildings—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It

excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

Selected purchased services—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

Assets and depreciation—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

Capital expenditures—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

Inventories—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

Ownership of construction projects—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

Value of construction work subcontracted in from others—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

Types of construction—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e, office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

Building construction:

- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.

- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.

- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.

APPENDIX B.

Standard Industrial Classification Titles for Industry Groups and Industries

SIC code	Industry titles
15	**BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS**
152	**General Building Contractors—Residential Buildings**
1521	General Contractors—Single-Family Houses
1522	General Contractors—Residential Buildings, Other Than Single-Family
153	**Operative Builders**
1531	Operative Builders
154	**General Building Contractors—Nonresidential Buildings**
1541	General Contractors—Industrial Buildings and Warehouses
1542	General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses
16	**HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS**
161	**Highway and Street Construction, Except Elevated Highways**
1611	Highway and Street Construction Contractors, Except Elevated Highways
162	**Heavy Construction, Except Highway and Street Construction**
1622	Bridge, Tunnel, and Elevated Highway Construction Contractors
1623	Water, Sewer, Pipeline, and Communications and Powerline Construction
1629	Heavy Construction, Not Elsewhere Classified
17	**CONSTRUCTION—SPECIAL TRADE CONTRACTORS**
171	**Plumbing, Heating, and Air-Conditioning Special Trade Contractors**
1711	Plumbing, Heating, and Air-Conditioning Special Trade Contractors
172	**Painting and Paper Hanging Special Trade Contractors**
1721	Painting and Paper Hanging Special Trade Contractors

SIC code	Industry titles
17	**CONSTRUCTION—SPECIAL TRADE CONTRACTORS**—Con.
173	**Electrical Work Special Trade Contractors**
1731	Electrical Work Special Trade Contractors
174	**Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors**
1741	Masonry, Stone Setting, and Other Stone Work Special Trade Contractors
1742	Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors
1743	Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors
175	**Carpentry and Floor Work Special Trade Contractors**
1751	Carpentry Work Special Trade Contractors
1752	Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified
176	**Roofing, Siding, and Sheet Metal Work Special Trade Contractors**
1761	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
177	**Concrete Work Special Trade Contractors**
1771	Concrete Work Special Trade Contractors
178	**Water Well Drilling Special Trade Contractors**
1781	Water Well Drilling Special Trade Contractors
179	**Miscellaneous Special Trade Contractors**
1791	Structural Steel Erection Special Trade Contractors
1793	Glass and Glazing Work Special Trade Contractors
1794	Excavation Work Special Trade Contractors
1795	Wrecking and Demolition Work Special Trade Contractors
1796	Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified
1799	Special Trade Contractors, Not Elsewhere Classified
6552	**LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES**

APPENDIX C.
Geographic Divisions and States

NEW ENGLAND STATES

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MIDDLE ATLANTIC STATES

New Jersey
New York
Pennsylvania

EAST NORTH CENTRAL STATES

Illinois
Indiana
Michigan
Ohio
Wisconsin

WEST NORTH CENTRAL STATES

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

SOUTH ATLANTIC STATES

Delaware
District of Columbia
Florida
Georgia
Maryland

SOUTH ATLANTIC STATES—Con.

North Carolina
South Carolina
Virginia
West Virginia

EAST SOUTH CENTRAL STATES

Alabama
Kentucky
Mississippi
Tennessee

WEST SOUTH CENTRAL STATES

Arkansas
Louisiana
Oklahoma
Texas

MOUNTAIN STATES

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

PACIFIC STATES

Alaska
California
Hawaii
Oregon
Washington

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(Available May 1990) [P]

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- Payroll
- Value of construction work done
- Selected operating costs

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- Census of Manufactures
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